

U. S. Application No. 10/717,26  
 Attorney Docket No. 2002B171/2  
 Reply to Office Action of July 14, 2006  
 Amendment dated October 10, 2006

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### AMENDMENTS TO THE DETAILED DESCRIPTION

Please amend the specification as follows:

Please replace paragraph [0064] on page 13 of the application as filed with the following replacement paragraph:

[0064] In one or more of the processes described herein, the metallocene includes a dimethylanilinium tetrakis (perfluorophyl) boron activator. Alternatively, the supported metallocene can include a methylaluminoxane ~~methylaluminoxane~~ activator.

Please replace the first full paragraph beginning on page 18, line 1 of the application as filed with the following replacement paragraph:

R<sup>5</sup> and R<sup>6</sup> are identical or different, and are one of a hydrogen atom, a halogen atom, a C<sub>1</sub>-C<sub>10</sub> alkyl group, which may be halogenated, a C<sub>6</sub>-C<sub>10</sub> aryl group, which may be halogenated, a C<sub>2</sub>-C<sub>10</sub> alkenyl group, a C<sub>7</sub>-C<sub>40</sub> arylalkyl group, a C<sub>7</sub>-C<sub>40</sub> alkylaryl group, a C<sub>8</sub>-C<sub>40</sub> arylalkenyl group, a  $[-NR_2^{15}] -NR'_2$ ,  $[-SR^{15}] -SR'$ ,  $[-OR^{15}] -OR'$ ,  $[-OSiR_3^{15}] -OSiR'_3$  or  $[-PR_2^{15}] -PR'_2$  radical, wherein: ~~R<sup>15</sup>~~ R' is one of a halogen atom, a C<sub>1</sub>-C<sub>10</sub> alkyl group, or a C<sub>6</sub>-C<sub>10</sub> aryl group;

Please replace the second and third full paragraphs beginning on page 19, line 3 of the application as filed with the following replacement paragraphs:

R<sup>10</sup>, R<sup>11</sup>, R<sup>12</sup> and R<sup>13</sup> are identical or different and have the meanings stated for R<sup>5</sup> and R<sup>6</sup>; wherein at least one of R<sup>13</sup> and R<sup>10</sup> are identical or different, and are one of a hydrogen atom, a halogen atom, a C<sub>1</sub>-C<sub>10</sub> alkyl group, which may be halogenated, a C<sub>6</sub>-C<sub>10</sub> aryl group, which may be halogenated, a C<sub>2</sub>-C<sub>10</sub> alkenyl group, a C<sub>7</sub>-C<sub>40</sub> arylalkyl group, a C<sub>7</sub>-C<sub>40</sub> alkylaryl group, a C<sub>8</sub>-C<sub>40</sub> arylalkenyl group, a  $[-NR_2^{15}] -NR''_2$ ,  $[-SR^{15}] -SR''$ ,  $[-OR^{15}] -OR''$ ,  $[-OSiR_3^{15}] -OSiR''_3$  or  $[-PR_2^{15}] -PR''_2$  radical, wherein:  $[R^{15}]$  R'' is one of a halogen atom, a C<sub>1</sub>-C<sub>10</sub> alkyl group, or a C<sub>6</sub>-C<sub>10</sub> aryl group; and

m and n are identical or different and are zero[,] or 1 or 2, m plus n is zero, 1 or 2.

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Please replace paragraph [0078] on page 21 of the application as filed with the following replacement paragraph:

[0078] In one or more of the polymer compositions described herein, the first diene monomer is 2-methyl-1,5-hexadiene or an  $\alpha$ , internal non-conjugated diene monomer selected from the group consisting of 2-methyl-1,5-hexadiene and 7-methyl-1, 6-octadiene.

Please replace paragraph [0084] on page 22 of the application as filed with the following replacement paragraph:

[0084] The  $\alpha$ , internal diene monomers may be linear, cyclic, and/or multicyclic, including fused and non-fused cyclic dienes. Preferably, the  $\alpha$ , internal non-conjugated diene monomers are linear. Also, preferably, the  $\alpha$ , internal non-conjugated diene monomers include  $\alpha$ , internal non-conjugated dienes in which the internal double bond is a vinylidene group or a tri-substituted unsaturation site. Examples of preferred  $\alpha$ , internal non-conjugated dienes include 2-methyl-1,5-hexadiene (which has a vinylidene group); 7-methyl-1,6-octadiene (which has a tri-substituted unsaturation site); dicyclopentadiene vinylbornene; ethylidene norbornene; 4-vinylcyclohexene; and 4-vinyl cyclopentene. Also available as a diene monomer in the present invention is 2-methyl-1,5 hexadiene (which has a vinylidene group).